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INDEX

FOREWORD 2
Professor J.P.M. Tizard, Chairman, Spastics Society Medical Advisory Council

1. THE WASTED LIVES 3
Dr. Cliff Roberton, Consultant Paediatrician

2. THE ACHIEVEMENTS OF A GOOD NEONATAL INTENSIVE CARE SERVICE 5
Dr. Geoffrey M. Durbin, Consultant Neonatologist

3. BRINGING HOSPITAL AND COMMUNITY CARE TOGETHER 7
Dr. M.J.V. Bull, General Practitioner

4. MIDWIFERY IN THE 80's – THE CHANGING SCENE 9
Anne Rider, Principal Officer, Royal College of Midwives

5. THE PREVENTION OF CONGENITAL MALFORMATIONS 13
Arthur and Margaret Wynn

6. WHOSE RESPONSIBILITY? 20
Dr. T.C. Noble, Consultant Paediatrician

7. NEONATAL SURGERY – THE GOVERNMENT'S RESPONSE IS NOT GOOD ENOUGH 23
Professor Andrew Wilkinson, Emeritus Professor of Neonatal Surgery

8. THE CRISIS IN NEONATAL CARE 24
Dr. Peter Dunn, Reader in Perinatal Medicine

9. A PLEA FOR MORE SUMS 25
Arthur and Margaret Wynn

10. A CHANGE IN TONE WOULD MAKE THE WORLD OF DIFFERENCE 28
Dr. J.D. Baum, Clinical Reader in Paediatrics

11. LOCUSTS AND WILD HONEY 30
Tim Yeo, Director of The Spastics Society

FOREWORD

It sometimes seems that the setting up of a government enquiry is not so much a prelude to action as a device for avoiding action. This suspicion is aroused by a scrutiny of the Reply (by the Secretary of State for Social Services) to the Second Report from the Social Services Committee on Perinatal and Neonatal Mortality (the Short Report). The Reply is certainly not devoid of positive features but its proposals for action fall far short of those hoped for by professional and non-professional people concerned with, and informed about, stillbirth, death of the newborn baby and long lasting handicap in survivors.

Taken together the eleven chapters of this booklet, the authors of which are experts in varying aspects of the care of the unborn and newborn baby, provide a formidable case for a more vigorous governmental response to the problems raised by the Short Report and for increased public expenditure on Maternity Services and the care of the newborn. The book can be regarded as a reply to the Reply! Is it too much to hope that, in turn, it too will elicit a reply, indeed a detailed commentary, from the Secretary of State?

The Spastics Society is determined that the Short Report will not simply be shelved and forgotten. If need be this is but our first gentle reminder to Government and the public of the existence of the Report and of its continuing validity and importance.

J.P.M. Tizard,
Chairman, Medical Advisory Committee
May 1981

THE WASTED LIVES

by N.R.C. Roberton, Consultant Paediatrician

The Government's refusal to provide funds in response to the Second Report from the Social Services Committee on Perinatal and Neonatal Mortality (The Short Report) is based on five lines of argument:

a. the data on the number of lives to be saved, or the amount of handicap which can be prevented, are in dispute; therefore, all the recommendations are suspect;
b. much of what is recommended is the responsibility of the Regional Health Authorities (RHA's) or the various professional bodies, and is nothing to do with central government;
c. much has been done already to reduce perinatal mortality;
d. spending money on perinatal care and neonatal intensive care is the wrong way to set about reducing perinatal mortality even further;
e. there is no money anyway!

I will deal with each of these points in turn.

(a) The numbers game

(i) Deaths. The Short Report stated that 5000 perinatal deaths per annum were preventable; the Government has retorted that probably only 1000 were preventable. One thousand babies dying unnecessarily every year should be regarded as a public health catastrophe, and a major indictment of NHS provision, yet the Government apparently condone this continued loss by stating that it did not justify the expenditure recommended in the Short Report. Furthermore, I believe that the numbers dying unnecessarily are greater than 1000 per annum for the following reasons. In England and Wales in 1979 there were approximately 10,000 perinatal deaths; 2688 of these were neonatal deaths in liveborn infants weighing less than 2.5 kg at birth. The national mortality rates for each 500 g birthweight cohort between 500 g and 2.0 kg are 50 to 100% higher than those reported from neonatal intensive care units supplying high-quality neonatal care. Therefore approximately 1000 of 2688 deaths probably could be prevented, plus a smaller number of infants weighing more than 2.0 kg at birth – say a further 500, giving an overall total of 1500 preventable neonatal deaths. Given that some of the approximately 5000 stillbirths in 1979 could also have been prevented, the figures suggest that 2000 to 2500 lives are lost unnecessarily in the perinatal period each year in England and Wales.

(ii) Handicap The numbers of children unnecessarily handicapped by inadequate perinatal services is impossible to quantify but, as with death, the DHSS seem to regard up to 1000 such episodes as being acceptable and not justifying improvement in the services (paras 21-22 in Government Reply).

It is a pity that much of the argument about preventable perinatally acquired handicap is centred on neurological handicap, since this is too narrow a view. Untold numbers of children with structural problems which should be recognised and treated at birth (eg congenital heart disease, congenital dislocation of the hip, posterior urethral valves) are missed because of lack of expert neonatal assessment and examination. For example, a recent study showed that the diagnosis of congenital dislocation of the hip was missed in the neonatal period in one of every 1500 infants born – 300 to 400 unnecessarily damaged children per annum from this cause alone.

(b) Responsibility for improvement lying with the RHA and professional bodies

This is little more than buck-passing. It is an unfortunate fact that the paediatric fraternity in the UK cannot reach agreement over whether neonatology is an important subspeciality. Fortunately, as can be seen from the 'paediatric jobs vacant' advertisements in the British Medical Journal, many teaching hospitals are ignoring this professional disarray and appointing full-time consultants in neonatology. In addition, many District General Hospitals are appointing consultants in paediatrics, with neonatology as a major subspeciality interest. This is a very clear 'statement of need'.

Furthermore, it is clearly unreasonable to expect RHAs to implement many of the provisions of the Short Report (eg recommendations 11, 12, 13, 16, 17, 18, 19, 20, 21, 22, 23) at a time when the Authorities, because of reduced Government funding, are having to make cutbacks in many areas of health care, without Government providing the additional money required; for example, to set up, equip and staff a neonatal intensive care unit.

(c) **Much has been done already**

This is true; but no thanks to Government. The implication in the Government's Reply, however, is that nothing else needs to be done. For the reasons explained in section (a) above, this is untrue.

(d) **Spending money on perinatal care services is not the way to reduce perinatal mortality**

This is only partially true. There seems to be a simple and naive belief that by spending money on some area of what might loosely be described as 'social services', prematurity will disappear, and with it all the medical problems in pregnancy necessitating early delivery, so that in the resulting Utopian society, all women would deliver 3.5 kg non-deformed, singleton, full-term infants.

While this is a noble and justifiable endeavour, there is little convincing data available to suggest precisely how this might be done, or even that attempts to reduce perinatal mortality in this way would be successful in the UK. After all, despite considerable improvements in health care since the 1939-45 war in this country, the prematurity rate has not fallen. Even the Swedes have a 4% prematurity rate.

Therefore, there is need to provide adequate perinatal facilities not only for the irreducible minimum of mothers and their infants who will always require them, but also to plug the yawning gap which exists at present, and which will persist for many years in perinatal services in the UK, even if the prematurity rate can be reduced.

(e) **There is no money anyway**

This is really an extraordinary argument by a Government which has spent tens of millions of pounds strengthening tower blocks of flats or box-girder bridges, which will result in saving five to ten lives per annum, if that.

How many babies have to die or be maimed before the Government is prepared to spend money on perinatal care?

Conclusion

It is clear that several thousand infants are dying or being maimed each year in the UK because of lack of health-service provision. Failure by a Government which is spending £12,000 million per annum on defence, to provide the fraction of one percent of that sum, which would permit an enormous national improvement in perinatal services, is a gross abrogation of responsibility.

THE ACHIEVEMENTS OF A GOOD NEONATAL INTENSIVE CARE SERVICE

by G.M. Durbin, Consultant in Neonatal Paediatrics

I should like to comment on the Government's Reply to the Short Report, with particular reference to the comment on neonatal intensive care.

The Government's Reply states: "There is some evidence that intensive care practised with less than the optimum level of equipment and expertise can lead to a high incidence of handicap among survivors. There is no doubt that highly skilled care avoids such high rates of handicap and that developing clinical procedures hold out the prospect of still further improvement; but in the present state of medical knowledge and with the limited skilled manpower available, any hasty or inadequately prepared expansion of intensive care could well increase, instead of reducing, the number of handicapped survivors" (para. 22).

I would question the implication of the final statement that hasty or inadequate expansion of neonatal intensive care would lead to an increased number of handicapped survivors. Inadequate neonatal intensive care is being offered to many hundreds of very low-birthweight infants. Paediatricians are no longer able to turn their backs on such infants, with the consequence that many are "having a go" at neonatal intensive care, with disappointing results in outcome. This point is best illustrated by looking at the results at the Birmingham Maternity Hospital over the past four years. Up to the end of 1978 no Consultant Paediatrician had had particular training in neonatal intensive care, though they were able to mechanically ventilate infants with idiopathic respiratory distress (hyaline membrane disease). From 1979 onwards the Regional Health Authority invested revenue and capital to develop a regional neonatal intensive care unit. This has resulted in the appointment of a full-time, trained, neonatal paediatrician and an expansion of the trained nursing staff to care for these infants, with modern equipment to help them. The expansion in the workload of very low-birthweight infants from 1979 reflects the use of the regional obstetric and neonatal intensive care units by peripheral obstetricians referring women to the hospital who require very preterm delivery. The results are tabulated below.

Neonatal outcome by birthweight: Inborn low-birthweight infants

Birthweight (grams)	Live births	Neonatal deaths	Survival (%)	Live births	Neonatal deaths	Survival (%)
Before funding for neonatal intensive care		*1977*			*1978*	
500- 999	12	12	0	24	19	20
1000-1500	24	11	54	21	8	61
1501-2000	56	6	89	60	6	90
After funding for neonatal intensive care		*1979*			*1980*	
500- 999	13	9	37	8	5	37.5
1000-1500	27	6	78	52	7	87
1501-2000	85	8	91	72	3	96

Assisted ventilation: Inborn infants with Hyaline Membrane disease*

	CPAP† alone	Ventilation +CPAP	Deaths	CPAP alone	Ventilation +CPAP	Deaths
Before funding for neonatal intensive care:		*1977*			*1978*	
Totals	7	11	6	9	10	6
Over-all mortality			34%			32%

NB No ventilator survivors of less than 2000 grams: 40% of ventilator survivors have serious handicap.

After funding for neonatal intensive care:		*1979*			*1980*	
Birthweight (grams):						
1000-1500	1	8	3	1	11	2
1501-2000	5	3	1	4	5	0
2001	8	6	0	3	7	0
Totals	14	17	4	8	23	2
Over-all mortality			13%			6%

NB Less than 10% of ventilator survivors have serious handicap

* Moderate to severe disease
† Continuous positive airway pressure

The conclusion to be drawn from these results is that the investment of financial resources has allowed people with training to develop a service which is both saving life and preventing handicap. Without the financial investment, a further 52 low-birthweight infants would have died in 1979 and 1980. The government must face up to the fact that the consequences of failing to put financial resources into intensive care of sick newborns means that infants are dying unnecessarily.

BRINGING HOSPITAL AND COMMUNITY CARE TOGETHER – A GP'S VIEW

by Dr. M.J.V. Bull, General Practitioner

The Government's Reply to the Short Report refers in para 9 to 'the progressive change in maternity care over the past three decades from a largely domiciliary/general practitioner based service to a highly specialised hospital based one'. In para. 20 they point to the 'persistence of these (social class) variations (in perinatal mortality) though several decades of advance in medical knowledge and improvement in health services'. But the Government has failed to see that one reason why the social class gap in perinatal mortality and morbidity has not been narrowed by the development of a highly specialised hospital service is due to lack of both health education and actual physical mobility in women of lower social class and the relative isolation of non-white ethnic groups, particularly those with communication difficulties. Inevitably these groups are more dependent on community based support during pregnancy. Since resources in terms of finance and personnel are limited, proposals for development must entail their deployment in the most cost-effective manner between hospital and community care.

Preconceptual Care

Health education in schools is paramount, especially in relation to human reproduction. The importance of diet, hygiene and fertility control should be stressed and the risks of smoking, alcohol and drugs emphasised. In the community, the health visitor and social worker are particularly well placed to identify adolescents at risk and to offer advice through the appropriate agencies. Later, for couples intending to start a family, preconceptual advisory clinics may be appropriate. Thus occupational hazards to fertility and foetal malformation can be avoided; immunity status to rubella can be ascertained and vaccination of susceptible women achieved before contraceptive measures are abandoned; familial abnormalities and genetic traits can be enquired about and formal genetic counselling arranged if appropriate. Finally, the importance of early and regular ante-natal care when pregnancy does occur can be emphasised.

Ante-natal Care

Ante-natal care will probably become increasingly concerned with the monitoring of foetal well-being in pregnancy. Screening facilities for serious foetal defects such as neural tube lesions and chromosomal abnormalities will become universal. Family doctors could become increasingly involved in implementation and would need to have direct access to services for alpha-foeto-protein estimation, ultrasound scanning and amniocentesis.

An increasing proportion of routine ante-natal care should be organised by primary care teams through G.P.s, community midwives and health visitors as the Government agrees in para. 66. Hospital clinics could then concentrate on high risk and complicated cases; their expertise should not be dissipated on low risk patients. Lower attendance rates at specialist clinics would not only improve consumer satisfaction but would ensure more rapid access for patients in greatest need. Parentcraft classes should be organised within the community, an important role for the health visitor. She should also be responsible for ensuring regular attendance of patients for ante-natal examinations especially those in the lower socio-economic groups who are at greatest risk. Employers now have an obligation to release employees for regular ante-natal clinic appointments without loss of earnings.

Care during the confinement

Figures currently available show that only 15% of all deliveries are now the responsibility of the GP obstetrician. Of these, about one third occur in isolated G.P. maternity units and two thirds in units within (or closely associated with) specialist units. The proportion of births in the former is diminishing; the latter increasing. This trend should be encouraged since facilities in isolated units often have little advantage over home deliveries, whereas, in integrated units, expert assistance and specialised equipment is readily at hand to deal with unforeseen emergencies. Selection of patients for booking at home or in isolated G.P. units should be intensified; for example, nulliparous patients should be excluded. On the other hand, criteria for booking into integrated units can, with the cooperation of specialist colleagues, be relaxed provided high standards of care are established. Furthermore, G.P. obstetricians as well as specialists can, when necessary, employ modern methods of

patient management such as induction, acceleration of labour and electronic monitoring. In this way, the number of patients that need to be transferred to specialist care in labour can be reduced, prolonged labour can often be avoided and continuity of care will be maintained. Since the latter attribute is largely responsible for the high degree of consumer satisfaction with G.P. maternity units, a more interventive style of practice may be justifiable in institutions where there are appropriate safeguards. Indeed, in the integrated G.P. maternity unit, the patient can have the best of both worlds.

Conclusions

The H.I.P.E. report (1974-76) revealed that nearly 50% of maternity patients suffered no complications in either pregnancy or labour. Theoretically, therefore, there is scope for a very considerable increase in community-based intra-natal care. For reasons expressed elsewhere* this is unlikely to occur either in the home or in isolated G.P. units. Logically then, there should be increased access for G.P. obstetricians to integrated maternity units and one might hope that ultimately this would occur in all district maternity hospitals. This trend would of course depend on the motivation of the practitioners but mandatory vocational training in obstetrics (recently recommended by the R.C.G.P. and the G.M.S.C.) as well as the provision of facilities, should prove to be a suitable stimulus. Since it is unlikely, however, that all G.P.s will wish to practise intra-natal obstetrics, we may well find that the enthusiasts will accept suitable patients from consenting colleagues and thus maintain their expertise through a significant annual case load.

However, not only would this solution to the logistic problems of community based obstetric care require the acquiescence and approval of consultant obstetricians, it would in all probability require a considerably increased number of community midwives. Recruitment of these essential personnel is already difficult, but implementation of the Short Report's recommendation that midwives' remuneration should be at least as great as that of health visitors might go a long way to resolve the situation. It is worrying to hear that the DHSS is proposing to continue the distinction between community and hospital midwives. An integrated midwifery service would be a great stimulus to cooperative health care between hospital and community.

One accepts that the measures proposed have limitations: Clearly G.P. maternity units integrated within district hospitals would be of no advantage to either patients or doctors in isolated areas. Since, however, the bulk of the population is in conurbations, the proposals might be to the benefit of the greater majority of patients in terms of the preservation of continuity of care during pregnancy, labour and the puerperium associated with maximum safety for both mother and infant. Neither would they involve a massive increase in financial expenditure.

In conclusion, more positive action is required from the Government than a recognition of 'the importance of arranging services so that the highest level of care is available to those mothers who need it most' (para. 66). The Government states that the DHSS will continue to encourage the primary health care team (para. 131). Then the Government says 'but better integration of the team. . . must depend above all on local commitment to these aims'. We need a stronger Government commitment to primary and preventive care as well as greater cooperation between hospital-based and community-based care. That is the way forward for the next decade.

* Bull, M.J.V. 1981 'The General Practitioner Accoucheur in the 1980's' J. Roy. Coll. G.P. – in press.

MIDWIFERY IN THE 80's – THE CHANGING SCENE

by Anne Rider, Principal Officer, Royal College of Midwives

> "Midwifery is the corner stone of British obstetric practice. Yet it is our impression from the evidence we have taken that never, in this country, has morale amongst midwives been at such a low ebb" – para 249 The Short Report.
>
> "Concern has been expressed by the committee about midwifery staffing. The intensity of care during the whole maternity cycle has, of course, to be taken into account but the number of qualified midwives is now some 18% higher than in 1963 when the number of births was near its peak; on average, each midwife now has to deal with 43% fewer births in a year than she did then, and 28% fewer than 9 years ago" – para 11 The Government's Reply to The Short Report.

Since the early sixties the midwifery profession has been concerned about the effect the many developments in midwifery/obstetric practice have had on the work of the midwife not only in terms of a changing role, but more recently in terms of quality and quantity of care which the midwife can give to mothers.

There are two main points to be made concerning the Government's comments on the midwifery manpower situation as quoted above from the Government's Reply to the Short Report.

Firstly, the Royal College of Midwives would question the *validity of the figures given.* It is not clear whether those relating to the whole time equivalents of midwives have been adjusted for the change in the hours per working week which took place during the years between 1963 and 1978. In 1963 the working week was 44 hours whilst in 1978 it was 40 hours. (The hours worked have again been reduced to 37½).

An additional factor which must be considered when comparing the figures for 1963 and those for 1978 is that frequently when coping with the "Birth Bulge" of the early 1960's midwives worked far in excess of the basic hours per week. This cannot be reflected as no over time payment was available and therefore no statistics of evidence can be produced. However, many senior midwives still working within the service are able to remember the situation and strongly resent being penalised now for excess work given with good will at that time.

Today there is far less likelihood of such excess work either being done or going on record. Over 60% of practising midwives are married and their home commitments do not permit them to work excess hours. The single midwife is frequently also not prepared to work excess hours because she has many more social commitments than her predecessors in the early 60's. The Government crudely relating manpower figures for 1963 with those for 1978 appears to take no account of these facts.

The second point to be made is that it is totally unrealistic to compare midwifery workload in the early 1960's with the late 1970's in terms of *deliveries.* Whilst it could be conceded that deliveries were the central part of the work of midwives in the early 1960's changes in midwifery/obstetric practice have taken place which have altered the pattern of care and profoundly affected the work of the midwife. It is also relevant to mention that these have not been offset, as is often stated to be the case, by the earlier ambulation of patients after delivery, or the increased involvement of the mother in the care of her own infant. Such activities require constant supervision by the midwife which is more time consuming than the midwife herself carrying out the tasks. The expectations of the parents have risen sharply and whilst by most this is a welcome factor which has brought improvements to the maternity services, this involves the midwife in spending much time in explaining services and treatment and generally reassuring parents. In fact, in every area of pregnancy care there have been factors increasing the work of the midwife whether she works in the hospital or community.

In the ante natal period alone such changes include more frequent and earlier ante natal examinations, and new ante natal investigations eg, routine screening for Bacteriauria, blood sugar investigations, various seriological/unrinary placental function tests, screening for fetal abnormalities, screening for maternal rubella titre, instructing mothers to record fetal movements, ultra sound and cardiotocography,

treatments including Insulin injections for gestational diabetes, Heparin injections for impaired placental function to name but a few.

With a greater emphasis being placed on parent and health education and the greater demand from the public for this, midwives are involved in many more educational activities than in the 1960's. This is clearly shown in the figures for women attending ante natal Mothercraft and Relaxation classes within the community. In 1966 145,000 patients attended and this figure had increased to 159,000 by 1979[1]. Unfortunately figures for similar activities within the hospital are not nationally available although there are indications that a similar increase has taken place there also.

Within the labour ward and obstetric theatres there have been an increase in complicated delivery rates, Caesarian Sections have increased from 6% to 7.3% from 1973-75[2] and the forceps delivery rates has increased from 12.3% to 12.7% from 1973-75[3]. Whilst comparison of figures shows that the actual numbers have fallen, the increased understanding of the needs of these particular mothers, together with the increased need for involvement with all mothers as indicated above, makes an added workload within the maternity services.

Other procedures which are now a customary part of labour ward work which demand more time from the midwife are mechanical fetal monitoring, acceleration of labour, induction of labour, and epidural anaesthesia. In the latter case the midwife may be involved in the "topping up" procedure of the epidural anaesthesia, and this procedure necessitates more frequent maternal observations.

Since the early 1960's there has been a proliferation of Special and Intensive Care Baby Units and this has meant that midwifery staff establishments have had to cover these additional areas within the maternity units. When allowances are made for sickness, study and annual leave it takes six full time equivalent staff to keep one person on duty over 24 hours of each day. This clearly indicates where some of the additional staff are used.

The major changes which have taken place during the post natal period which add to the work of the midwives is in permitting the mother, and sometimes the father, to take a very much more active part in relation to infant feeding and infant care. This requires detailed instructions, and more supervision than before when the midwife herself would care for the baby. Midwives in the post natal period are now involved in giving Rubella Vaccinations to those patients who have been shown to be non-immune to Rubella during the antenatal period, and in also giving Anti-D iso-immunisation to mothers with Rhesus negative anti-bodies after delivery.

Screening tests for infant abnormalities carried out by the midwife introduced as a routine since the 60's include the Guthrie test and others for inborn errors of metabolism.

It is also true to say that within the ever increasing pressures within society the midwife has to spend more and more of her time counselling the patient, and often the husband, regarding her social problems and uncertainty about how she will cope at home. In addition to this the midwife is now frequently involved in giving family planning advice and psychosexual counselling. As suggested in the paper on The Future Role of the Midwife in the Maternity Services (CNO(76)(20)) the hospital and community midwife may be active in giving family planning advice, psychosexual counselling, and the community midwife in following up abortion cases.

As the midwifery training programme has changed, hospital midwives are involved in much more clinical teaching. Since the 12 month integrated training was introduced in the early 1970's and with the newly proposed 18 month training commencing in September 1981 hospital midwives have to set time aside daily to undertake clinical teaching at ward level.

As new subjects have been introduced into the midwifery training programme, in-service training for midwives has had to take place to maintain the level of knowledge amongst the trained midwives as well as those in training. Such in-service training, though of vital importance in keeping midwives up-to-date about professional and NHS matters, inevitably detracts from clinical care.

The EEC Nurses Directives demand that *all* student nurses undertake a maternity care programme during their three year State Registration training. These programmes are approved by the Central Midwives Board. They are carried out within the maternity unit and mean that, in many places, there is a constant through-put of student nurses often undertaking a four to six week course. The emphasis

on the course is placed on the observation of normal pregnancies. This demands that midwives are frequently involved in supervising such observations and explaining the procedures which are being carried out. Whilst midwives generally enjoy this teaching it has a delaying factor on the amount of work which they themselves can undertake.

Whilst much of the above evidence is difficult to quantify, a research project sponsored by the DHSS and originally brought about because of concern of the Royal College of Midwives about the role and training of the midwife, is taking place in the Nursing Education Research Unit at Chelsea College, University of London. The terms of reference for the Research are:-

TO ANALYSE THE ROLE AND RESPONSIBILITIES OF THE MIDWIFE AND TO DEVELOP THE CURRICULUM FOR MIDWIFERY TRAINING.

Although not yet complete the research has indicated an *acute shortage of midwives.* During the pilot studies for the first stage of the project which involved Obstetricians, General Practitioner Obstetricians and Health Visitors as well as Midwives the research team became aware of considerable concern regarding the shortage of midwifery staff and its effect on standards of patient care and on staff morale. Consequently a number of questions on this topic were included in the questionnaire used for the main field work which was undertaken in 1979.

A question on staffing figures was included in a paper sent to all Heads of Midwifery Service in England and Wales which invited the figures for midwifery staff in the current funded staff establishment and that of the staff in post (in whole time equivalents). The manpower evidence collated has been published as an interim report of the research project[5].

The questionnaire which evoked an 83.8% response rate revealed an overall shortage of all midwifery staff grades as at the 31st December 1978. (*In particular that of the Staff Midwife grade showed a 17.9% shortfall, Midwifery Tutors showed a 14.8% shortfall and Student Midwives showed a 14% shortfall.*)

It is perhaps relevant to point out that:

i. funded staff establishments are rarely ideal;
ii. the grade of Staff Midwife makes up the majority of midwives within the establishment;
iii. the shortfall of Midwifery Tutors and Student Midwives will undoubtedly affect future recruitment.

The confidentiality of the project does not permit identification of specific Regions but wide Regional differences in staff shortage were indicated, eg. *for the Staff Midwife grade the variation range of shortfall was from 7.9% to 27%.* This substantiates the statement made in some Districts that recruitment of midwives is extremely difficult.

Whilst the Chelsea Research Project was not intended to be an in-depth manpower study, the data on staffing figures does reflect what the profession has been saying regarding inadequate staffing levels for some years. In his evidence to the Short Committee on the 20th February 1980, Patrick Jenkin referred to the Midwifery Manpower Report by the Chelsea College and stated that "I think it is fair to say that the results of the preliminary findings are certainly not grounds for complacency and I do think I would be putting it too high to say they are disturbing. This is something to which my Department is obviously going to have to give very close attention indeed".

Since the publication of the Short Report the Department of Health have initiated a midwifery workload study by the Central Management Services (NHS).

> "To obtain detailed and comprehensive information on the work of a sample of hospital-based midwives, taking into account the professional and supporting staff work associated with it; to collect information on the organisation, structure and activities of the Maternity Service, and to assess the consequences for the manpower required of any changes in such factors; to ascertain reasons why qualified midwives do not practise, or give up midwifery, and to submit a report on the results of the study."

The Royal College of Midwives awaits the results of this work promised at the end of 1981, and subsequent action by the Government.

If a comparison is made between the number of hours worked by midwives and those worked by doctors it becomes clear that the midwifery profession is responsible for the major proportion of care given to mothers during pregnancy. Based on this fact if midwives are insufficient in numbers this cannot fail to have a profound affect on the quality of the service. The midwifery profession is concerned with giving the highest possible standards and quality of care to mothers and babies and with reducing perinatal mortality rates. Given the work which must be done to achieve these standards together with the current staffing levels it can be seen that this is becoming an increasingly difficult task to achieve.

References

1. **Social Trends**, 1981 (HMSO) Table 8. 30, Maternity Services.
2. **Hospital In-Patient Enquiry**, 1973-75 (HMSO) Table 11
3. **Hospital In-Patient Enquiry**, 1973-75 (HMSO) Table 12
4. **Central Midwives Board Annual Report**, year ending March 1980.
5. **Midwifery Manpower**, Table 1, Sarah Robinson, Nursing Education Research Unit, Chelsea College, University of London. (Project on the role and education of the Midwife)
6. Social Services Committee Session 1979-80. **Perinatal and Neonatal Mortality Evidence** Vol IV. para. 667.

THE PREVENTION OF CONGENITAL MALFORMATIONS

by Margaret and Arthur Wynn

The Government, in their Reply to the Short Report, said:

> "If the causes of perinatal deaths in this country are compared with those with lower perinatal death rates, it is immediately clear that major congenital malformations (particularly of the central nervous system) occur much more frequently in this country. . . . Unfortunately, in the present state of knowledge only a minority of these congenital malformations can be prevented by improved care before pregnancy and in the antenatal period" (paras. 17 and 18).

This note comments on that view.

A generation ago a writer on congenital malformations said:

> "The majority of developmental defects are caused by a combination of circumstances involving many genetic and many environmental factors. Each etiological factor that is understood may allow some reduction in frequency". [1]

One 'etiological factor' was suggested by a pathologist writing on vitamins in endocrine metabolism [2]:

> "Much more could be done in the field of preventive medicine to cut down the large numbers preventible congenital defects. In human fetal development, most abnormalities are established by the eighth to the tenth week of gestation. This means, of course, that the most important period for nutritional care occurs in the few weeks before and immediately after conception."

The embryo, in the first eight weeks, needs an environment containing hormones and nutrients in much better controlled concentrations than are necessary later in pregnancy, when the fetus has its own endocrine system and protective placenta [3]. A long history of food shortage and famine going back at least to the siege of Paris in 1870-71 teaches the consequences of poor nutrition during the weeks around conception in the records of epidemics of malformations and the associated low birthweight. There was a food shortage in parts of Holland from October 1944 until May 1945 which was later painstakingly documented by an American team [4]. The data from this study have been used to produce Figure 1, which shows the perinatal mortality of babies born and conceived through this difficult time in Holland.

It can be seen that the big increase in perinatal mortality was not among the babies born during the food shortage but among those born nine months later, who had been *conceived* during the food shortage. Among these babies born nine months later there were increases of more than 100 per cent in the more lethal types of congenital malformations. The increase in the deaths of babies under 12 months of age from malformations of the central nervous system is shown in Fig 2 and from other types of malformations is shown in Fig. 3.

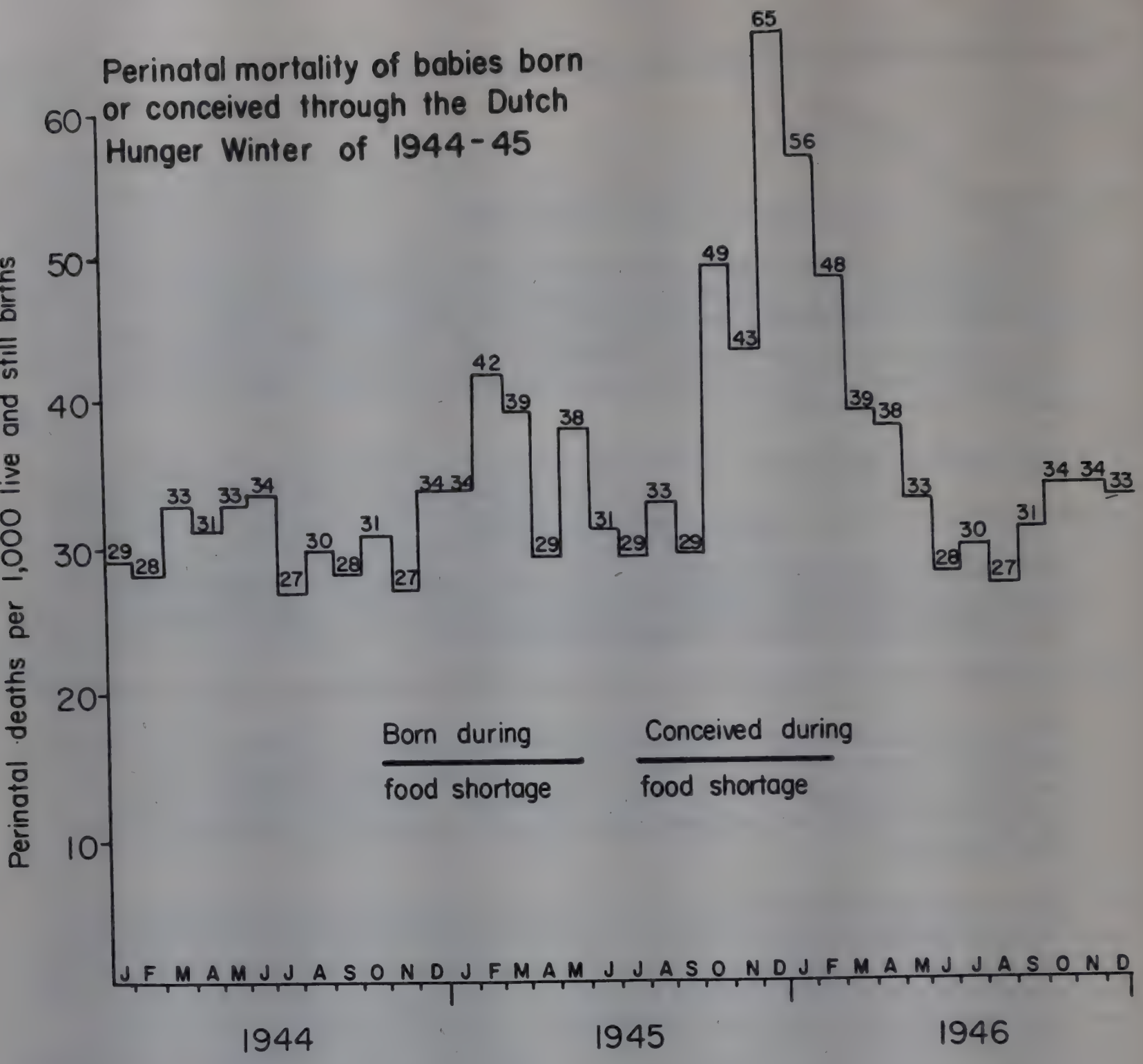
Perinatal mortality of babies born or conceived through the Dutch Hunger Winter of 1944-45
Perinatal deaths per 1,000 live and still births
60
50
40
30
20
10
29 28 33 31 33 34 27 30 28 31 27 34 34 42 39 29 38 31 29 33 29 49 43 65 56 48 39 38 33 28 30 27 31 34 34 33
Born during food shortage
Conceived during food shortage
J F M A M J J A S O N D J F M A M J J A S O N D J F M A M J J A S O N D
1944
1945
1946

Figure 1 Source: Wynn and Wynn, 1981 based on data in Stein et al. 1975

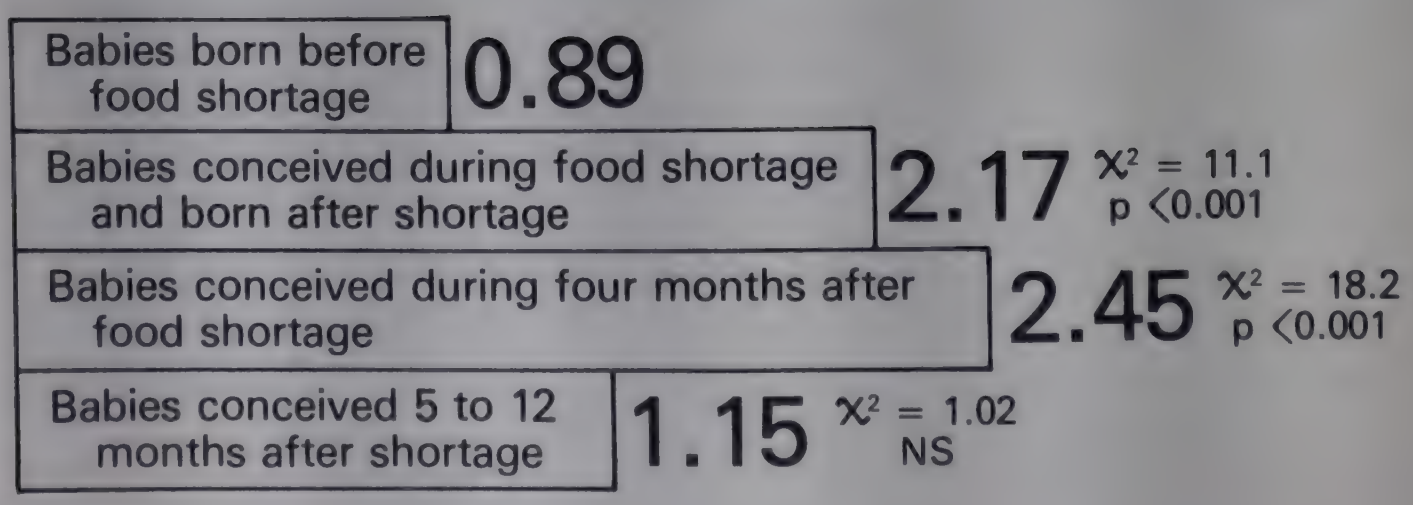

Figure 2 CNS malformations and food shortage: deaths under 12 months from malformations of the central nervous system among babies conceived before, during and after the food shortage in Holland October 1944 to May 1945: deaths per 1000 births. Source: Stein et al., 1975.

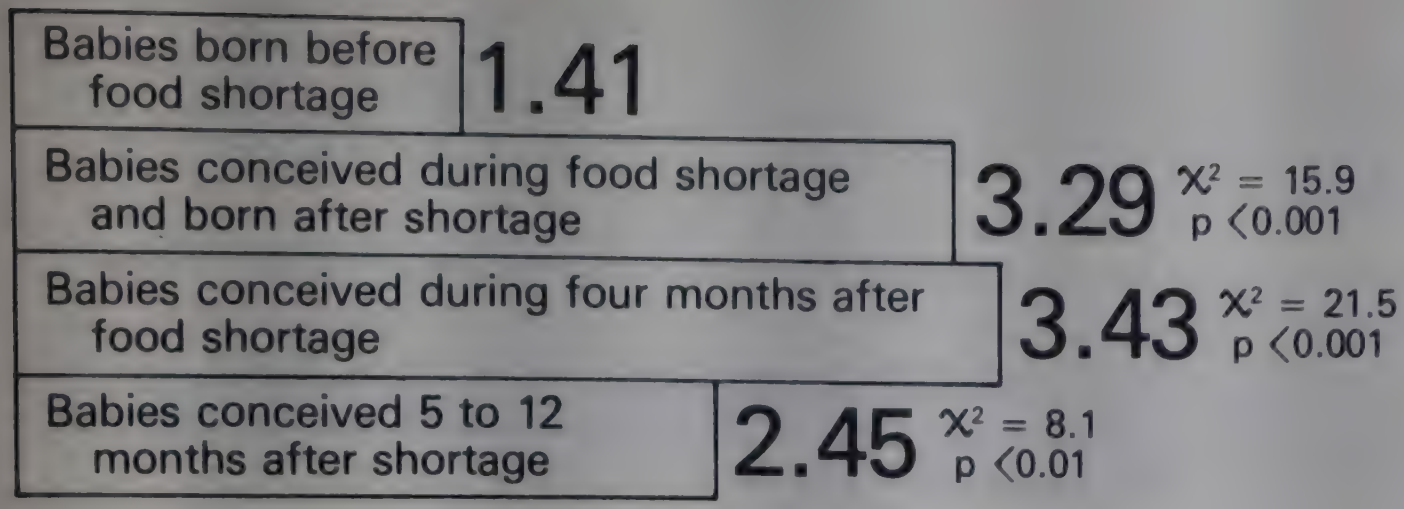

Figure 3 'Other malformations' and food shortage: deaths under 12 months from malformation other than those of CNS among babies conceived before, during and after the food shortage in Holland October 1944 to May 1945: deaths per 1000 births. Source: Stein et al., 1975.

Figure 2 and Figure 3 understate the increase in numbers of malformed babies *conceived* during the food shortage because the babies born before the shortage had to live through a time of great difficulty whereas the babies born nine months later were born in peacetime, after full restoration of food supplies, but nevertheless died in greater numbers. Food shortages were more severe and prolonged in German cities; an example of an epidemic of CNS malformations in Dresden following defeat of the German armies and the Russian occupation is shown in Fig. 4.

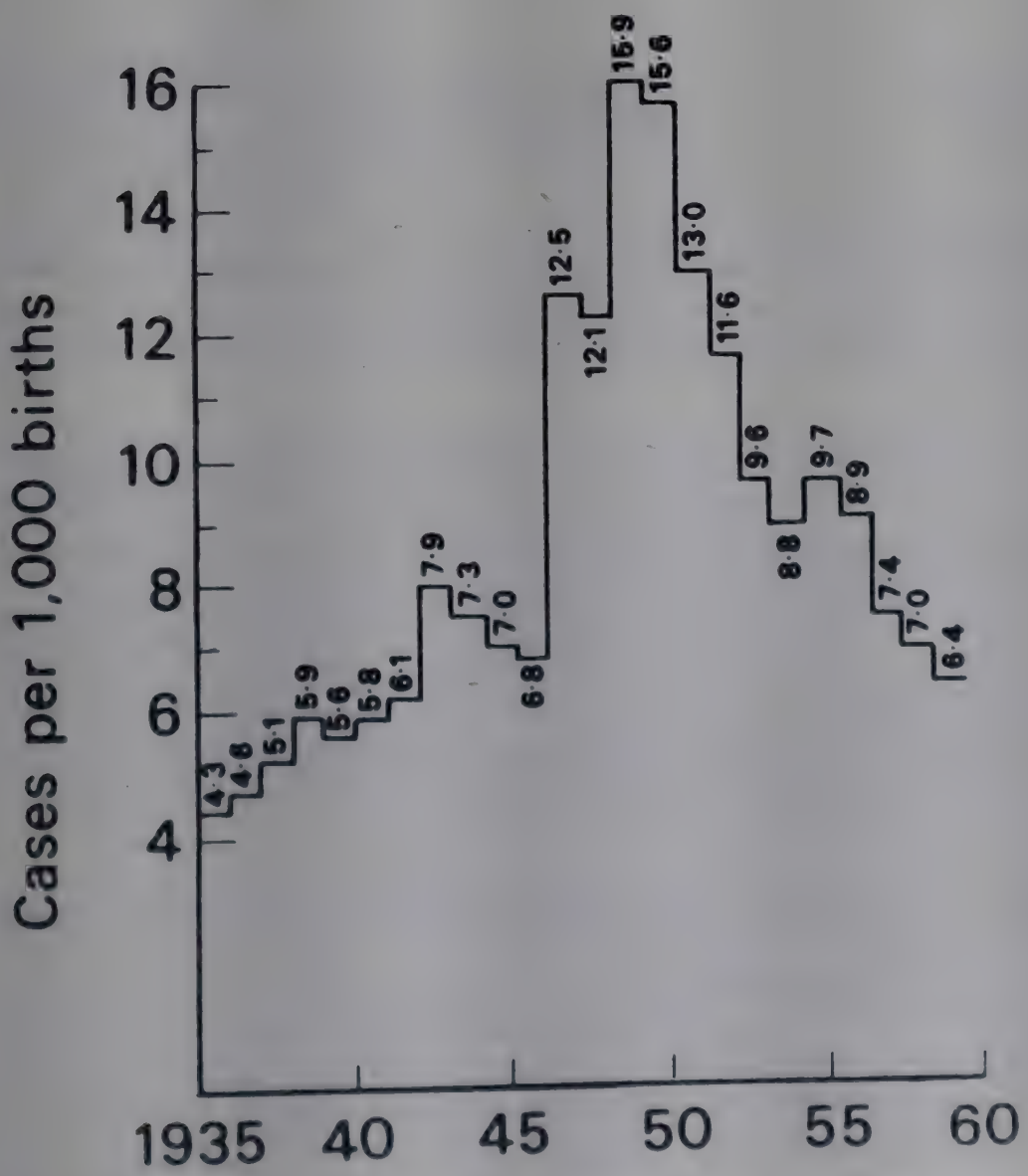

Figure 4 Congenital malformations of newborn: Dresden, 1939-59, 100,328 births. Source: Hohlbein, 1959.

It may be asked how far this hard-won human experience is relevant to the occurrence of malformations in peace-time Britain 35 years later. The prevalence of many of the more serious types of malformation is associated with low birthweight caused by reduced rates of cell replication in early pregnancy. In a leading article, the *British Medical Journal* in May 1980 reviewed a small part of the literature showing an association between low pregnancy weight and low birthweight and other disorders of pregnancy: it concluded:

> "Undernutrition before pregnancy clearly has both immediate and long-term implications for the health of the infant". [5]

The results of one of many studies showing the association of low pre-pregnancy weight with birthweight for women of similar height is shown in Fig. 5. The BMJ leading article throws doubt on the wisdom of slimming women who may become pregnant.

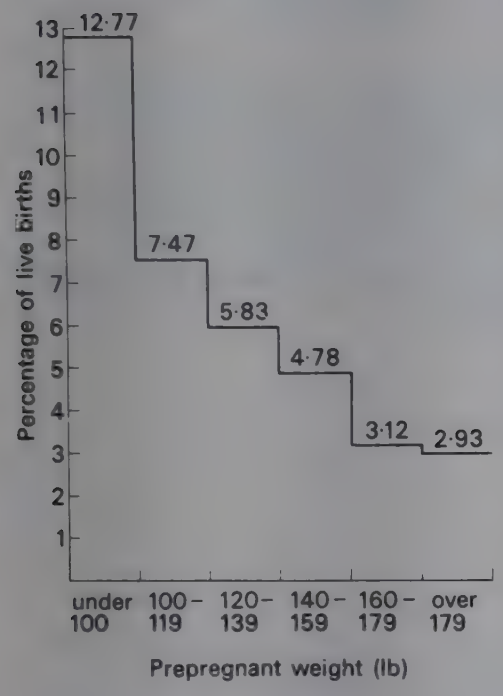

Figure 5 Percentage of births under 2,500g by mothers' pre-pregnancy weight, USA, 1959-65, 7,054 white mothers all of height 63-65 in. (Source: Niswander and Gordon, 1972)

How severe, then was the involuntary weight-reduction of Dutch women which caused the subsequent great increase in perinatal mortality and in the incidence of malformations? The average weight lost compared with normal times during the worst three months of the food shortage in Holland was 5.8 kg, or about 13 lb. The lowest estimate of average pre-pregnancy weight during these worst three months was 53 kg (8st 5lb).

Present-day studies of infertility show that if women reduce their weight by dieting, a point is always reached when they become amenorrhoeic and infertile. The point at which this happens varies widely between women but studies from several countries show a mean bodyweight between 52 kg and 55 kg (and 53 kg in British studies) at the onset of amenorrhoea for the woman of average height[6-8]. It was this weight of 53 kg that the average Dutch woman of reproductive age experienced during the worst three months of food shortage, and their fertility fell by just over 50 per cent. The least well-fed women became infertile and it was the women who were just well enough fed to be fertile, but not well enough fed to have healthy babies, who produced the malformed babies and other perinatal casulaties. The malformation rate is correlated with this infertility of nutritional origin. *The risk of malformation increases as the infertility threshold is approached.*

This weight of 53 kg for average height is right within the range of bodyweights designated 'desirable' by the DHSS[9]. The forthright advocacy of slimming by the Health Education Council[10] includes a weight range designated 'OK' which goes down to 49 kg (7st 10lb) for women of average height, a weight at which most women would be amenorrhoeic and infertile. These various weights are compared in Table I. The weight ranges described as 'desirable' by the DHSS or 'OK' by the HEC were taken from an American insurance company and have been critically reviewed by Keys[11]:

"The fact is that the tables of 'ideal' or 'desirable' weights are armchair concoctions starting with questionable assumptions and ending with three sets of standards for 'body frames' which were never measured or even properly defined. Unfortunately, these tables have been reprinted by the thousand and are widely accepted as gospel truth. . . Both extreme under- and over-weight seem likely to entail risk, but there is no acceptable evidence that relative bodyweight has any consequence to future health for women in the middle 80 per cent of the relative weight distribution".

Professor Keys' review did not include any of the many studies of the effect of women's weight on the outcome of pregnancy. Bodyweight recommendations for women of reproductive age, and indeed for all men and women, are overdue for a long hard look.

Table I

Weight ranges for women as recommended by DHSS and Health Education Council with some comparisons: women of average height 162.6 cm or 5' 4".

	Weight Ranges	
	kg	st. lb
Range designated as 'desirable' by DHSS for women of medium frame[1]	51.3 to 57.2	8st 9lb to 9st
Range designated 'OK' by Health Education Council[2]	49 to 60	7st 10lb to 9st 6lb
Mean weight at onset of amenorrhoea (British figures)[3]	53	8st 5lb
± 1s.d. confidence limits for onset of amenorrhoea (British figures)[3]	47 to 59	7st 6lb to 9st 4lb
Mean weight at onset of amenorrhoea (American figures)[4]	55	8st 9lb
Average weight at conception of Dutch women during worst three months of food shortage 1944-45	53	8st 5lb
Nordic standard weight	61	9st 9lb

1 DHSS, 1978, p59
2 HEC, 1980, p16
3 Crisp, 1978, p113
4 Frisch, 1977, p155
5 Lindberg et al., 1956. These are based on average Norwegian weights and are used in at least some Scandinavian women's clinics as desirable weights.

The Medical Research Council advises the DHSS and the HEC. The Council's witnesses tried hard to persuade the Social Services Committee of the House of Commons that maternal nutrition has little or no effect on the outcome of pregnancy, and referred to the hunger in Leningrad in 1942 and the Dutch hunger winter of 1944-45 in support of this view, but without any facts and figures[(12)]. In fact the papers on these historical events showed, on the contrary, that maternal malnutrition had very damaging effects on the outcome of pregnancy, particularly by increasing malformations and deaths from 'pre-maturity' among the babies whose mothers were exposed to malnutrition around conception as seen in Figures 1, 2 and 3. The Medical Research Council's witnesses even denied the effects of maternal nutrition on the outcome of pregnancy in animals, despite a substantial world literature, and contradicting quite extensive documented evidence given to a US Senate Committee[(13)]

The animal experiments show that both malformations and infertility can be caused in mammals by a great variety of nutritional deficiencies, notably by deficiencies of individual vitamins and minerals and combinations of such deficiencies. The animal experiments provide a warning against any over-simple assumptions about the many causes of malformations; an adequate calorie intake is only one contributory cause. Nutritional deficiencies also potentiate the damaging effects of such toxic substances as thalidomide, lead or tobacco smoke[(3)].

The prevention of congenital malformations requires the development of pre-pregnancy care, or preparation for pregnancy, which involves much besides nutrition. New approaches to pre-pregnancy care are being pioneered by Professor R.W. Smithells in Leeds[14] and Professor K.M. Laurence in Cardiff[15]. However, there are large numbers of women who receive no medical advice after the birth of a growth-retarded or malformed baby, and indeed find it difficult to get advice. Most parents only need to be made aware of the problem to do all that is possible to solve it. The first thing to be done is to establish awareness in normal, sensible parents of the need for pre-pregnancy health. A sustained effort at public education about pre-pregnancy health should begin in schools but continue into adult years.

Acknowledgement: Table 1 and Figures 1, 2 and 3 are reproduced from Wynn and Wynn (1981) **Prevention of Handicap of Early Pregnancy Origin**, by kind permission of the Foundation for Education and Research in Child-Bearing, 27 Walpole Street, London SW3.

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WHOSE RESPONSIBILITY?

by T.C. Noble, Consultant Paediatrician

Introduction

The Short Report points out the unnecessarily high perinatal mortality rate in England and Wales and identifies measures which could be taken to reduce this. It emphasises the wide differences between social classes and between geographical areas. Many of the measures suggested would involve a substantial increase in expenditure, but others could be achieved by little more than reorganisation and changes in attitude.

The Government Reply, no doubt dictated by their concept of the need to reduce public expenditure, is generally negative, and where they admit that the Report's recommendations are valid they usually direct that Area and Regional Health Authorities shall take steps to implement them, but without any increase in budget.

The point is well made in the Short Report that there are two necessary actions which have to be taken. *Firstly,* there is need to initiate improvements in education, the level of employment, the general state of mental and physical health and the identification and assistance of the small proportion of the population who are unable to look after their own or their children's well being. This will be a slow process, but should pay the higher dividend over the next generation.

Secondly, there is the urgent necessity to improve those medical services which have to deal with the results of ignorance and poverty as they reflect on human reproduction. This calls for an immediate allocation of funds, a proportion of which would be recovered by a reduction in the number of infants born handicapped and requiring expensive care throughout their unproductive lives. The Government Reply (para. 62) argues unconvincingly against such an allocation, and returns to its usual theme of putting the responsibility of providing extra funds onto health authorities, within their present financial allowances (para. 63). It is probable that the only thing which would make Government change their minds is widespread public representation.

Some Comments on the Short Report

I think the members of this Social Services Committee have achieved an astonishingly deep understanding of the problems and deficiencies in the services presently provided for the antenatal care and delivery of mothers, and the neonatal care of infants in England and Wales. They rightly emphasise the greatly increased risk of death and handicap for the babies of those women who find it difficult to make use of the full range of social and medical services, and who find it difficult to take care of their own health, and they allocate an appropriate section of the Report to suggesting logical remedies. They highlight the current disagreements among both mothers and doctors on the minimum size of safe and efficient maternity units, and I would join them in recommending the development of larger units. An essential corollary to this is the concept, detailed in Chapter 15, of humanising the system: this could be done at little or no financial cost, but does call for urgent re-education of doctors and midwives, whose training in future must include specific instruction from psychologists, humanists and experienced mothers. Often we have been so involved in providing scientific physical care that we have omitted to think of the mental and physical comfort of mothers in maternity units.

There are a few areas where I would differ slightly from the Committee, and in which I would be more inclined to agree with the Government Reply. These are:

1. I think the failure of the perinatal mortality rate in England and Wales to fall as rapidly as that of, say, Sweden, Japan and France does depend partly on our very high incidence of neural tube defects, and on our relatively higher number of lower social-class population.

2. I do doubt that there are 5000 severely handicapped infants born each year whose handicap always could be prevented by improved medical services. With regard to deaths, the estimate of 3000-5000 which could be avoided also seems optimistic, and possibly was estimated by comparing the results from poor units with those from the very best, whose standards of staffing and equipment are unlikely to be reproduced in every area without the expenditure of very large sums of money.

3. On the subject of eliminating abnormal conceptions of babies with chromosome abnormalities in older mothers, I would agree, but I am probably in a minority who think that widespread screening by serum testing for neural tube defect is so inaccurate at present that it exposes an unnaceptably high proportion of mothers to the dangers of amniocentesis, when the majority of those tested (7 : 1) will have normal babies, some of whom might be aborted accidentally as a result of the procedure. Rather would I go for universal ultrasonic scanning of all fetuses at the 14th week of pregnancy to confirm their gestational age and to identify anencephaly, and some cases of spina bifida without risk to normal pregnancies. Amniocentesis should be reserved for those mothers who have previously borne infants with neural tube defects, until the serum test can be improved in its predictive accuracy.

4. Most of what is written about neonatal services is accurate and logical but it is unlikely that the immediate appointment of many more neonatologists would greatly improve the standard unless they were supported by more junior staff, extended buildings and substantial increases in equipment.

The Committee recommend more pathology sessions on perinatal pathology, but in my experience very few pathologists are inclined to limit their work to this age group or even to limit it to paediatrics as a whole.

I applaud the comments on 'Withdrawal of Care' because, like most paediatricians, I am opposed to surgical interference or intensive care for infants so obviously handicapped that their lives would be miserable and probably brief in spite of treatment. This must be publicly discussed or pressure groups may invoke the force of the law to impose their minority opinion on those whose experience has led them to develop their present attitude. If paediatricians are to be prosecuted for failure to encourage cruel treatment then surely every obstetrician who terminates a pregnancy should suffer the same criticism.

The Government Reply to the Short Report

While it must be admitted that there are some logical objections to recommendations in the Short Report, and I have some sympathy for a Government faced with so many varied demands, the general tone of the Reply is depressing in the extreme. The majority of the Committee's recommendations are accepted, but where these involve financial expenditure the responsibility is off-loaded on to Regional or District Health Authorities who are thereby put in the same dilemma as the Government in terms of conflicting demands.

On the subject of special funding for obstetric and neonatal services, the Government arguments are unconvincing, and to compare perinatal care with hip replacement or haemodialysis seems facile (para. 63). I should imagine that a referendum would make this clear. Even though I have some sympathy with the Government in its present economic plight, I think that the argument for an immediate allocation of special funds is overwhelming and irrefutable. There is so little money for manoeuvre at Area level that the essential improvements could never be fulfilled within existing budgets.

Paragraph 93 of the Reply emphasises that service needs should be met by trained doctors. Neonatal care is an area in which this is impossible because of frequent emergency demands, and if consultant neonatologists were to attend every abnormal delivery they would be unable to cope with ward rounds, intensive care, outpatient clinics or teaching sessions. How are registrars to be trained if not by accepting responsibility under supervision? Certainly an increase in the establishment of consultant neonatologists is overdue, but registrars and Senior House Officers will have to continue to provide the front line service.

Paragraphs 106 and 107 in the Government Reply ignore the fact that the status of general practitioners in relation to maternity care may have to change if improvement is to be achieved. The majority of general practitioners themselves would approve of recommendations 62 on the organising of refresher courses and 63 which requires all pregnant women to be seen twice at the consultant unit. Recommendations 65 and 66 concern audit of the Service. This is essential and should include morbidity as well as mortality in neonatal intensive care units.

I am uncertain on what data Government base their conclusions on midwifery staffing levels (para 11), but from personal experience of a fairly large and modern obstetric unit I should say that midwifery staffing is at present inadequate and if the measures suggested to humanise hospitals were implemented, many more mature staff would be needed.

In paragraph 136, the Government represent themselves as being eager to reduce cigarette smoking, yet little action has been taken beyond increasing the price of cigarettes in proportion to the cost-of-living index. A strong Government could decimate smoking over a few years by more radical increases in duty.

Conclusion

I think that the most effective way in which to persuade the Government to allocate more resources to antenatal and perinatal care is to educate the public on the current deficiencies in service and to encourage them to make their voices heard.

NEONATAL SURGERY – THE GOVERNMENT'S RESPONSE IS NOT GOOD ENOUGH

by Professor Andrew Wilkinson, Emeritus Professor of Paediatric Surgery.

It is no good for the DHSS to put the onus, as they always have done, on Regional Authorities to provide a service for the surgical care of the newly born. This has resulted in the wrong distribution of the facilities. For example, there are two paediatric surgeons in Brighton, sixty miles from London, where there are eight specialist paediatric surgeons in three children's hospitals, but in East Anglia, as the report says, there are none. In three other large centres in England there is only one paediatric surgeon, each of whom has to try to provide a service, 24 hours a day, 7 days a week single-handed; when he or she is sick or on leave the service falls down.

The provision of a specialist neonatal surgical service remains often, as it has been in the past, at the mercy of the ambition of paediatric physicians, who can arrange for a surgeon to be appointed, sometimes in isolation, to be at their beck and call. There is no provision in the mind of the DHSS, as reflected in their reply, for a properly designed and integrated national neonatal surgical service and I wonder whether they have any idea what modern neonatal surgery is about.

The DHSS, like many medical paediatricians, seem still to believe that as long as there is a medical paediatrician at hand to deal with preoperative treatment and preparation of a baby for operation, to tell the surgeon when to operate, and to control the management of the baby after operation, there is little need, if any for specialist paediatric surgeons.

The modern neonatal surgeon is a paediatrician with a knife in his or her hand and with specialised training, experience and knowledge of the effects of surgical injury and how to manage them. Most medical paediatricians have limited experience in this field.

THE CRISIS IN NEONATAL CARE

by Doctor Peter M. Dunn, Reader in Perinatal Medicine

The Government's response to the Short Report argued for priorities in the NHS to be decided regionally, and against central funding for areas of particular need. The effect of such a policy up to now on the relatively new and expensive provision of neonatal care can be summarised as follows:

Dr. Edmund Hey has pointed out in a letter to the Social Services Committee that, although the DHSS recommended that *regional intensive care units* be established in 1971, only eight of the fifteen regions in England and Wales had done so by 1980. And, while the DHSS had estimated that 320 intensive care cots would be needed, nine years later only half this number had been created. Furthermore, many experts believe that at least 650 cots are required, or 1 per 1000 births. Dr. Hey concluded that: "Few regional subspeciality services in the Health Service have developed in such a slow and haphazard way. Nearly every other country in Western Europe and North America developed a comprehensive network of regional referral units for neonatal intensive care more than five years ago."

The staffing for newborn care is equally unsatisfactory. Recent surveys in England and Scotland demonstrated a desperate shortage of paediatric staff as compared with professional recommendations, especially in the consultant and registrar grades. Figures made available to the author by the Central Board of Midwives suggest that only 63% of the special and intensive care nursing establishment recommended by the DHSS in 1971 was in post in 1978. And here again, many would consider the 1971 recommendations to be inadequate.

There is also a widespread and serious deficiency of *intensive care equipment.* For example, there was a 45% shortfall in neonatal ventilators in England in 1978. Indeed, the situation would be very much worse but for the magnificent support of charities and the public. Many of us now spend a considerable amount of our own time raising funds for equipment that we are unable to obtain through the Health Service. Thus, in Bristol, five of our six expensive but vital transcutaneous oxygen monitors have been provided in this way.

With this knowledge, it should come as no surprise that some regional referral units have to turn away half the infants for whom admission for intensive care is sought nor to find that the Short Committee estimated that up to 5000 infants die unnecessarily each year in the perinatal period and that a similar number sustain avoidable handicaps. And it would be wrong to assume that these casualties involve only very small infants: less than half those admitted to special and intensive care units are born preterm and fewer than 15% weigh less than 1.5 kg at birth.

How may we rest satisfied when we know that so many newborn infants still die or are damaged because of the lack of trained staff and facilities? If some of us appear vociferous and insistent, it is against this background of apathy and neglect. What makes our sad record so unforgivable is that the great majority of these preventable tragedies take place, not on the roads (selective DHSS quotations notwithstanding) but in consultant units in which mothers are urged to have their babies because of the risks of childbirth. Mr. Roland Moyle was right when, in the debate on the Short Report, he drew the attention of the House of Commons to the fact that a whole series of national studies over the past few years had shown that the key target for action in the Health Service must be the period just before and after birth, both to prevent a great deal of human misery and to lead to long-term savings.

This paper is adapted from a letter to the Lancet, 17th January 1981, and is printed with the Lancet's permission.

A PLEA FOR MORE SUMS

by Margaret and Arthur Wynn

The importance of a problem can be judged on scales of value which may be religious, ethical, compassionate or political, but an orderly and efficient world requires some notice to be taken of the economic scale of values. The economic scale can never be overriding but it is the only scale that takes into account the size of the problem, the cost to the community in the present and in the future and its relevance for a country's prosperity.

The Government's Reply to the Short Report does not attempt to estimate the size of the problem of handicap originating early in life. The Government's Reply states that:

> "The Government do not believe that at present the information exists on which to base a reliable estimate of the number of such handicaps. . ." (para. 21).

The number and the distribution of the afflicted is the first and most elementary kind of knowledge needed to assess the size of a health problem. Cancer is another important health problem. Cancer statistics, in contrast to those for handicap of perinatal or early childhood origin, are excellent. The Office of Population Censuses and Surveys publishes the cancer statistics, which places their collection under expert control at national level. Cancer information is available by sex and age, site of cancer, metropolitan county, urban and rural aggregates, and by occupation and social and socio-economic groups. How is it that the Government collects and publishes excellent data about cancer and, by its own admission, highly deficient information on handicap? Is cancer, then, a more important problem than handicap?

Although there is inadequate information on the numbers of the handicapped, there is enough to put both cancer and handicap on an economic scale which shows that the cost of handicap is much higher than the cost of cancer. There are many more hospital beds occupied by the handicapped, because they are handicapped, than by cancer patients. Furthermore, 60% of first admissions to mental handicap hospitals are of young persons under the age of 20, while over half the first cancer registrations are for persons aged over 65 years. The loss of working life, particularly from age 55 to 65, caused by cancer is important, but it is only a fraction of the loss of working life caused by handicap of early origin which results in total or partial loss of earning-capacity for a lifetime.

Excuses are made, for example that handicap such as spasticity is difficult to diagnose and classify, and that there is no agreement on definitions. For many years the Danes have had a Cerebral Palsy Register which records and classifies sufferers reported at any age. The Danes know how far the different kinds of cerebral palsy have been increasing or diminishing in prevalence during the last thirty years in different parts of Denmark. The same information is not available in Britain. What the Danes can do so can the British. Much handicap can only be diagnosed and assessed during early childhood. What progress has been made by the Government in implementing the promise of four years ago in *Prevention and Health* (Cmnd. 7047 p.31):

> "The Health Departments will. . . ask health authorities to seek to ensure that a basic programme of health surveillance is offered for the testing of all children at appropriate ages for specific conditions such as phenylketonuria and disorders of hearing and vision".

This is one essential step, recommended by the *Court Report* into child health services 1976 ("Fit for the Future").

In the collection of health statistics the Government has got its priorities wrong as between cancer and handicap.

The same non-economic priority is seen in research expenditure; the Government, including the Medical Research Council, and indeed the country as a whole, spends several times as much on cancer research as on research contributing to the prevention of handicap, or indeed on research into all aspects of human reproduction. The Short Report said (para. 369):

> "We were very surprised to find that the DHSS had no estimate either of the cost of caring for individuals with preventable handicaps, or of the cost of preventive measures, apart from those mentioned in para 361."

Paragraph 361 described prenatal screening programmes for neural-tube defects and for Down's syndrome. Of course the size of the problem is not in itself a satisfactory yardstick for judging how much money should be spent; it only provides the most elementary information needed for rational priorities. The economic scale of values also suggests that low priority should be given to expenditure that does not benefit patients or the public. This requires much more difficult sums than are needed only to assess the size of the problem. If the sums are not done and priorities are not decided, or not even influenced by an economic scale of values, they nevertheless have to be decided. They are then decided primarily by following the precedents for resource allocation in the past, modified by the weight of advocacy supporting increases for this department or that, tempered by such principles as that of fair shares or Buggin's turn next. If the sums are not done before this allocation of resources then the final allocation is likely to differ very greatly from the allocation which would most benefit patients and the public.

The Reply states (para. 63):

> "More money for a neonatal intensive care cot might be less money for a haemodialysis machine or a hip replacement".

The Reply does not give any results of sums showing which of these three uses of resources gives the best pay-off, and the answers may be widely different, but the Reply has chosen to compare a neonatal intensive care cot with two other selcted uses of resources which also give a pay-off; all three of these uses of NHS resources benefit patients. The DHSS knows full well that there are reports showing that there are large *areas* in the NHS which provide no pay-off at all. This is not peculiar to the NHS; it is true of all health services. A book on the health of France[1] quotes reports showing that in some large hospitals the cost of treating patients who are in the terminal phase of an illness exceeds the cost of treating patients who genuinely benefit from treatment (Escoffier-Lambiotte 1979). The current cost per patient in such hospitals is over £400 a week. For example, an American paper is quoted as showing that a large part of the total cost of sickness insurance is devoted to patients who die soon after treatment. The book concluded that in general the treatment of these patients, often elderly, was both *couteux et inhumain.* The great majority of such patients would be much better served at much lower cost by hospice types of institution in which the only aim of the staff was the peace and contentment of the patients in their last weeks or days. There was however an important minority of patients in the most expensive hospitals, about one patient in six, who might be expected genuinely to benefit from high-technology medicine. Countries that make and publicize the results of such studies will have more efficient health services in due course. If the Government had its priorities right there would be money for neonatal intensive care, haemodialysis, hip replacement and many other projects if activities were cut back which give no pay-off at all.

The Secretary of State was perhaps speaking of industry and the economy when he said (Social Services Committee vol. IV para. 609):

> "Certainly the main thrust of Government economic policy is to create an economy capable of generating extra resources."

Health services can 'generate extra resources' in the same sense; for example if they enable a baby to become a skilled workman instead of a patient in a hospital for the handicapped. An economic scale generally gives greater weight to preventive services and to investment, as against current consumption. R.W. Conley, in his classic book[2] showed that well-designed services for educating and training handicapped children show benefits which much exceed the costs that would otherwise be incurred. Conley shows benefit-cost ratios as high as 5:4 for mildly retarded males receiving 'special education', discounting all future costs and benefits at 7 per cent a year. The handicapped are much more expensive when they are older if they are not helped during childhood and adolescence as far as possible along the road to normality and independence, because of the greater care they then require and their reduced capacity for making a contribution themselves. Conley's book is full of the kind of sums that are needed to make NHS priorities more rational.

References

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A CHANGE IN TONE WOULD MAKE THE WORLD OF DIFFERENCE

by J.D. Baum, Clinical Reader in Paediatrics

There is much in the Government's Reply to the Short Report that could be positive and creative, both in terms of action taken directly by the DHSS and that referred for consideration to the individual Regional Health Authorities. What is so disappointing is the tone of the reply which is so profoundly negative, in stark contrast to the enthusiastic approach found in the Baird Report on infant mortality from North Ireland[1]: Whatever the economic constraints and however firmly entrenched in a policy of decentralisation, the Government should not try to smother a positive move for the future planning of improved maternity services in this country. After all, we are all committed to the same purpose of improving maternal and child health and it is surely in everyone's best interest that continuing discussions take place to secure a firm foundation for better perinatal services for the future. The Secretary of State was wrong to have been so off-hand in the tone of his Reply.

I believe that the most important and potentially constructive section of the Secretary of State's Reply is the very last one (para. 174). This states that the Government intends to consider the Short Committee's recommendation to establish a *Maternity Services Advisory Committee,* which would represent obstetricians, neonatal paediatricians, GP obstetricians and midwives. If such a committee existed, with direct links to the Department of Health on the one hand and to the Regional Health Authorities on the other (thereby to the profession through the Regional Sub-committees), then we would have mechanism for a 'long-sustained and pressurised campaign over a period of years' (the Minister's words) for establishing and maintaining standards and norms, ensuring the humanising of the perinatal services, and considering detailed problems referred from the Regional Health Authorities. What a pity the Secretary of State did not put this forward with some enthusiasm as a fundamental and constructive development.

The next point which strikes me as of great importance in the Reply also comes in Chapter 25 on administration and finance. This concerns the establishment of *Regional Perinatal Working Parties.* In paragraph 173 of his Reply, the Secretary of State deflects this issue for consideration by Health Authorities. It seems to me that this is the kind of issue on which prescriptive guidance should have been given (without any fear of immediate or substantial financial consequences). Regional Working Parties offer the possibility of providing accurate, detailed information on the state of the perinatal services hospital by hospital, district by district throughout the regions of the country. Indeed, a number of Regions have established working parties looking at neonatal services, some of which have already been published (e.g. South-east Thames, Trent, Oxford). Here is an opportunity to provide grass-roots information to match with theoretical models of standards and norms and thus identify the areas within the perinatal services in most urgent need of attention locally and nationally. Could not the Secretary of State have *required* the establishment of Regional Perinatal Working Parties?

The next point I would select for comment relates to *standards and norms.* These are dealt with in part two of the Reply, which covers Government views on some major general aspects of the Short Report. In paragraph 42 (page 11) the Government argues against the establishment of standards and norms because they might be used on the one hand to represent minimum standards, or on the other hand to represent maximum standards, and would restrict the freedom of Health Authorities in making the best use of their resources. Nevertheless, paragraph 44 on the same page states that the views of the profession should be sought to discover how much scope there is for studying organisational and staffing patterns and equipment in different types of maternity and neonatal units. I cannot see how the future of the perinatal services can be planned properly without the establishment of standards and norms. While I appreciate that it is highly likely that the implementation of such standards would have very substantial financial consequences for the Health Service, I believe that the Secretary of State could have rephrased and re-ordered his reply on this point, without committing himself to *immediate* expenditure, but giving a constructive turn to his approach.

The Government endorse the importance which the Short Committee attached to *humanising* all aspects of maternity care (page 45 of the Reply). Here, however, I would take the Secretary of State to task for being disingenuous in failing to understand that a service cannot be 'humanised' by directive, since it actually boils down to *more staff* in all the perinatal services, thereby allowing enough *time* for all midwives, neonatal nurses, obstetricians and paediatricians to listen to parents and give advice at a personal level. This is the essence of a humanised perinatal service: it cannot come about by the Government referring the concept to Health Authorities for consideration!

There are many items in the Reply which are of great importance but which are dealt with unsatisfactorily. These include such crucial items as securing adequate junior paediatric staff to provide 24-hour cover in maternity hospitals; steadily and very substantially increasing the number of consultant neonatal paediatricians; recognising neonatal paediatrics as a subspeciality within paediatrics; and establishing separate case-records for every baby. These are fundamental considerations which I would see as being the first items on an agenda for consideration by a Maternity Services Advisory Committee, were one to be established.

It is unfortunate that the tone of the Government's reply, particularly as reported in the Press, dashed the hopes of so many members of the perinatal services who had looked to the Short Committee's report as the beginning of a change towards improved maternal and child health services. The Secretary of State must recognise that the perinatal services are held together by overworked, dedicated people and that it is short-sighted to demoralise them in the way he has. There is sufficient that is actually positive in his Reply which, if presented properly and followed through, would make the world of difference.

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LOCUSTS AND WILD HONEY

by Tim Yeo, Director of The Spastics Society

Since 1952 when The Spastics Society was founded one of its primary objectives has been the prevention of cerebral palsy. Among the ways in which this objective has been pursued has been the promotion and support of medical research into the causes of cerebral palsy – notably the establishment (with Society funds) of the Paediatric Research Unit at Guy's Hospital.

In addition to many smaller extra-mural research projects, the Society has been involved on a regional basis in many fund-raising campaigns to provide much needed medical equipment.

Recently, however, its most important endeavour has been the 'Save a Baby' campaign, which was launched in 1978 with the aim of raising the level of public, professional and governmental awareness of the need to take action to save babies from dying and to prevent severe handicap in those who survive.

At that time, there was insufficient public awareness of the maternity and child health services and, indeed, the 1976 DHSS Priorities for Health and Personal Social Services document had singled out the maternity services for no growth. The 'Save a Baby' campaign employed a wide variety of methods to put this message across. These included intensive advertising in the national press, seminars and talks throughout the country, the publication of many leaflets, handbills and reports, a nationwide petition with more than one million signatories presented to Parliament, the asking of a large number of parliamentary questions, the production and distribution of three films and mobile exhibitions. Proposals were submitted by the Society to the DHSS/CPAG conference on 'Reaching the Consumer in Antenatal Care' in April 1978 and attention was drawn to the need for maternity care to be organised in a way which meets the needs of women, and recognises the many practical problems which make it difficult – if not impossible – for women to attend antenatal clinics.

Against this background, the Society welcomed the announcement in the autumn of 1978 that the then Social Services Employment Sub Committee of the House of Commons Expenditure Committee (now known as the Social Services Select Committee) was to undertake an Enquiry into Perinatal and Neonatal Mortality. The Society submitted both written and oral evidence to the Committee and explained that its interest was in both the prevention of unnecessary baby death and avoidable handicap. Particular concern was expressed about the fact that although the rate of perinatal and neonatal mortality in the United Kingdom had fallen over recent years, the rate of decline was slower than in other comparable countries. Furthermore, the continuing wide variation in mortality rates between social classes and the similar disparity on a regional basis, was regarded as wholly unacceptable. The percentage of low birthweight babies in this country is 50% greater than that in Sweden. After a period of decline, the proportion increased to 7.2% of total births in 1979. In its evidence to the Committee, the Society called for action in four areas:

1. Health education
2. Poverty in pregnancy
3. Antenatal care
4. Minimum standards for obstetrics and neonatal care

When the Social Services Select Committee Report was issued in July 1980, the Society welcomed it and stated in a letter to the Secretary of State for Social Services that:

> "We believe that the report is a comprehensive blueprint for action to reduce perinatal and neonatal mortality and morbidity.
>
> However, we are uneasy that this report will join the others on the shelf. In the last ten years there have been numerous documents and reports on the maternity and child health services which have demonstrated that we have the skill to save babies from death and to enable babies to survive free of handicap, but successive governments have failed to act. If this report is left to gather dust, if its recommendations are not implemented, then the Government must be held to account for the babies who die or suffer preventable handicap.

We believe it is essential for the Government to establish minimum standards of obstetric and neonatal care. Care during pregnancy, childbirth and immediately after birth will directly influence the health of each individual. Standards of care can no longer be left to the vagaries of individual health authorities. The safe, healthy and happy outcome of pregnancy can no longer be dependent on geographical luck. Optimum care must be a universal right."

The Society was deeply dismayed with the Government's Reply, issued in December 1980, which cavalierly rejected the basis of the Committee's report, calling into question whether it is possible to reduce perinatal and neonatal mortality and morbidity and disputing the cost-effectiveness of the prevention of handicap. During the debate on the Government's Reply, speakers from all sides of the House referred to the Society's campaign and expressed dissatisfaction with the Government's position. Since December, the Society has had a series of discussions with Dr. Gerard Vaughan, Minister of Health, and participated in the All Party Disablement Group delegation to the Secretary of State for Social Services in February 1981. It is pleasing to learn that one tangible gain has been recorded in the form of the Government's commitment to the establishment of minimum standards of obstetric and neonatal care. This is an important step in the right direction, although much will need to be done to ensure that these minimum standards do not become a norm.

As part of its continuing campaign, The Spastics Society joined with the National Council for One Parent Families, the Child Poverty Action Group, the Maternity Alliance, Association for Spina Bifida and Hydrocephalus, BLISS, All Party Disablement Group, RADAR, Health Visitors Association, Brook Advisory Centres, Royal College of Midwives and Royal Society of Medicine, General Practice Section, in May this year in issuing a Joint Statement, 'A Charter for the 80s' to the Minister of Health. This Statement, which was also endorsed by the British Paediatric Association and the Maternity Services Sub Committee of the British Medical Association, challenged eight points of the Government's stand on maternity and neonatal services.

1. It rejected the Government's view that unfavourable demographic factors are unalterable and these adverse influences cannot be countered by properly organised health care.

2. It called for closer consultation between the DHSS and consumer groups as well as with professional bodies in formulating minimum standards and a Code of Good Practice.

3. It highlighted the dangers of excessive concentration on antenatal care within hospitals.

4. It called for the Government to urge local education authorities to appoint coordinators of health education in every school.

5. It deplored the declining role of midwives.

6. It stressed the need for well-trained GPs to be more involved in maternity care.

7. It produced fresh evidence that expert neonatal care can save lives without causing severe handicap in survivors and called for the introduction of a national structure of neonatal intensive care.

8. It urged the Government to earmark expenditure for improvements in maternity and neonatal services.

The publication of 'Who's Holding the Baby Now?' is a further step in the Society's campaign to ensure that the scandal of avoidable death and handicap amongst Britain's newborn babies is not forgotten by the Government. It is the view of The Spastics Society that the contributors to 'Who's Holding the Baby Now?' have effectively dismantled the main points contained in the Government's White Paper issued in reply to the Social Services Select Committee Report. 'The Wasted Lives' demonstrates that better perinatal and neonatal intensive care will indeed reduce perinatal mortality and handicap, pins the responsibility for achieving such improvements firmly on the DHSS as opposed to the regional health authorities and, thirdly, confirms that the number of avoidable deaths and handicapped survivors is far greater than the Government at present admits. In 'The Achievements of a Good Neonatal Intensive Care Service', the suggestion in the Government's Reply that an expansion of neonatal intensive care would result in an increased number of handicapped survivors, is convincingly refuted. In 'Bringing Hospital and Community Care Together – a GP's View' the dangers of excessive concentration on hospital-based care, particularly in terms of excluding many of the women most at

risk, are underlined. In 'Midwifery in the 80s – the Changing Scene', the Government's complacent denial of a crisis in the midwifery profession is utterly rejected. In 'The Prevention of Congenital Malformations' the vital importance of proper nutrition during the early weeks of pregnancy and the consequent need for better and more effective health education are amply demonstrated.

'Whose Responsibility?' stresses the need for a central allocation of money without which the resources needed for essential improvements in the service will never be forthcoming. In 'Neonatal surgery – the Government's response is not good enough', the absurdity of relying on regional authorities to establish an adequate structure of neonatal intensive care is exposed. 'The Crisis in Neonatal Care' underlines the appalling consequences of the failure to establish a proper structure of neonatal intensive care. In 'A Plea for More Sums' the inferiority of the statistics for handicap of perinatal or early childhood origin compared with those for cancer, despite the greater cost of the former, is emphasised and the complete failure of the DHSS itself to estimate the cost benefits of preventive measures is highlighted.

Finally, in 'A Change in Tone would make the World of Difference' the central importance of the establishment of minimum standards is stressed.

The Spastics Society hopes that readers of this pamphlet will agree that most of the arguments used by the Government to avoid acting on the recommendations of the Social Services Select Committee Report are wholly untenable. However the Society, in common with the other contributors, is concerned with much more than winning an intellectual argument. What is at stake is the survival and well-being of future generations and this is an issue which transcends political differencies. By bringing these issues to the attention of a wider audience, The Spastics Society hopes to ensure that sustained public and political pressure will compel the Government to take the action which is so plainly and so urgently needed.

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